

RECEIVED
CENTRAL FAX CENTER

JAN 19 2005

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
Examiner E. Chang	Antony P. Ng, Reg. No. 43,427
COMPANY:	DATE:
U. S. Patent and Trademark Office	January 19, 2005
FAX NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER:
703.872.9306/Central No.	9
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
	JP91999021SUS1
RE:	YOUR REFERENCE NUMBER:
Response to Notification of Non-Compliance (Appeal Brief)	09/754,483

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PLEASE RECYCLE

NOTES/COMMENTS:

Please see the attached formal response, and feel free to call me at (512) 343.6116 should you have any questions concerning the attached.

1. (Substitute) Appeal Brief

Respectfully submitted,

Antony P. Ng

This fax from the law firm of Dillon & Yudell LLP contains information that is confidential or privileged, or both. This information is intended only for the use of the individual or entity named on this fax cover letter. Any disclosure, copying, distribution or use of this information by any person other than the intended recipient is prohibited. If you have received this fax in error, please notify us by telephone immediately at 512.343.6116 so that we can arrange for the retrieval of the transmitted documents at no cost to you.

8911 N. CAPITAL OF TEXAS HWY., SUITE 2110, AUSTIN, TEXAS 78759
512.343.6116 (V) • 512.343.6446 (F) • DILLONYUDELL.COM

RECEIVED
CENTRAL FAX CENTERIN THE UNITED STATES PATENT AND TRADEMARK OFFICE JAN 19 2005
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Attorney Docket No.: JP919990215US1

In re Application of:

§

SHIGEFUMI ODAOHHARA

§

Serial No.: 09/754,483

§

Filed: 1 APRIL 2001

§

For: POWER SUPPLY UNIT AND
COMPUTER

§

§

Examiner: CHANG, E.

Art Unit: 2116

APPEAL BRIEF

MS Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Notification of Non-Compliance, please replace the previous Brief filed on September 22, 2004 with the present Brief.

An amount of \$330.00 for the submission of an Appeal Brief should have been charged already; thus, no additional fee or extension of time is believed to be required. However, in the event an additional fee or extension of time is required, please charge that fee to the IBM Corporation Deposit Account 50-0563.

CERTIFICATE OF FACSIMILE TRANSMISSION
37 CFR § 1.8(a)

I hereby certify that this correspondence is being transmitted to the United States Patent and Trademark Office via facsimile on the date below.

1/19/05
Date

Vicky Diligawsky
Signature

TABLE OF CONTENTS

TABLE OF CONTENTS	2
REAL PARTY IN INTEREST	3
RELATED APPEALS AND INTERFERENCES	3
STATUS OF THE CLAIMS	3
STATUS OF AMENDMENTS	3
SUMMARY OF THE CLAIMED SUBJECT MATTER	3
GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL	4
ARGUMENT	4
<i>Ferry</i> does not teach or suggest a detecting circuit for activating one of two power supply circuits based on the amount of current supplied to the two power supply circuits	4
CLAIMS APPENDIX	7

REAL PARTY IN INTEREST

The present application is assigned to International Business Machines Corporation, the real party of interest.

RELATED APPEALS AND INTERFERENCES

No related appeal is presently pending.

STATUS OF THE CLAIMS

Claims 1-13, which were finally rejected by the Examiner as noted in the Final Office Action dated July 13, 2004 and in the Advisory Action dated August 31, 2004, are being appealed.

STATUS OF AMENDMENTS

Two amendments were submitted subsequent to the Final Office Action dated July 31, 2004. In the first amendment, Claim 6 was amended according to the suggestion given by the Examiner in the above-mentioned Final Office Action; thus, amended Claim 6 should be entered for the purpose of Appeal. In the second amendment, Claims 1-5 and 11 were cancelled.

SUMMARY OF THE CLAIMED SUBJECT MATTER

Within a personal computer (PC), a direct current (DC)-to-DC converter is typically utilized to convert a first DC voltage level to a second DC voltage level. The DC-to-DC converter can be implemented by a switching power supply circuit and a series power supply circuit.

Generally speaking, switching power supply circuits have relatively low power conversion efficiencies under light loads. On the other hand, series power supply circuits have relatively low power conversion efficiencies under heavy loads. The present invention provides a power supply unit that is capable of furnishing a high power conversion efficiency under a wide range of loads. The power supply unit of the present invention is intended for portable PCs such as notebook

computers, sub-notebook computers, personal data assistants, etc., which are required to alternate between an active mode and a suspend mode on a relatively frequent basis.

In accordance with an embodiment of the present invention, a voltage converter (such as a DC/DC converter 66' described on page 28, lines 13-18 and shown in Figure 5) includes a first power supply circuit (such as a series power supply circuit 100 described on page 30, line 28 and shown in Figure 5), a second power supply circuit (such as a switching power supply circuit 102 described on page 30, line 29 and shown in Figure 5), and a detecting circuit (such as a detecting circuit 140 described on page 28, lines 18-21 and shown in Figure 5). Both the first power supply circuit and the second power supply circuit are capable of converting an input voltage to an output voltage. The first power supply circuit is connected in parallel with the second power supply circuit. Based on the amount of current supplied to the first and second power supply circuits, the detecting circuit activates either the first power supply circuit or the second power supply circuit to convert an input voltage to an output voltage (page 30, line 27 - page 31, line 1).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Examiner's rejection of Claims 6-10 and 12-13 under 35 U.S.C. § 102(e) as being anticipated by *Ferry et al.* (US 6,150,798).

ARGUMENT

The Examiner's rejections of Claims 6-10 and 12-13 are not well-founded and should be reversed.

Ferry does not teach or suggest a detecting circuit for activating one of two power supply circuits based on the amount of current supplied to the two power supply circuits

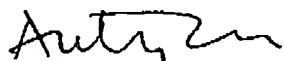
Claim 6 recites "a detecting circuit for activating either said first power supply circuit or said second power supply circuit to convert said input voltage to said output voltage based on an amount of current supplied to said first and second power supply circuits" (lines 7-9).

On page 4 of the Final Office Action, the Examiner asserts that the claimed detecting circuit is disclosed by *Ferry* because *Ferry* teaches that "the control means selects one of the regulation components according to the current consumed by the load" in col. 3, lines 40-42. However, the claimed detecting circuit makes its selection based on the amount of current supplied to a first power supply circuit and a second power supply circuit, and not based on the current consumed by the load, as disclosed by *Ferry*. Thus, *Ferry* does not teach or suggest the claimed detecting circuit that activates one of the power supply circuits based on the amount of current supplied to the power supply circuits. Because the claimed invention recites novel features that are not taught or suggested by *Ferry*, the § 102 rejection is improper.

CONCLUSION

For the reasons stated above, Appellant believes that the claimed invention clearly is patentably distinct over the cited references and that the rejection under 35 U.S.C. § 102 is not well-founded. Hence, Appellant respectfully urges the Board to reverse the Examiner's rejection.

Respectfully submitted,



Antony P. Ng
Registration No. 43,427
DILLON & YUDELL, LLP
8911 N. Cap. of Texas Hwy., suite 2110
Austin, Texas 78759
(512) 343-6116

ATTORNEY FOR APPELLANT

CLAIMS APPENDIX

1-5. cancelled

6. A voltage converter comprising:

a first power supply circuit capable of converting an input voltage to an output voltage;

a second power supply circuit capable of converting said input voltage to said output voltage, wherein said second power supply circuit is connected in parallel with said first power supply circuit; and

a detecting circuit for activating either said first power supply circuit or said second power supply circuit to convert said input voltage to said output voltage based on an amount of current supplied to said first and second power supply circuits.

7. The voltage converter of Claim 6, wherein said first power supply circuit is a series power supply circuit, and said second power supply circuit is a switching power supply circuit.

8. The voltage converter of Claim 6, wherein said first power supply circuit has a relatively high conversion efficiency during a low load demand, and said second power supply circuit has a relatively high conversion efficiency during a high load demand.

9. The voltage converter of Claim 6, wherein said first power supply is activated by said detecting circuit when said current amount is below a predetermined value, wherein said second power supply is activated by said detecting circuit when said current amount exceeds said predetermined value.

10. The voltage converter of Claim 6, wherein said current amount is below a predetermined value when said voltage converter is in a suspended state, wherein said current amount exceeds said predetermined value when said voltage converter is in a non-suspended state.

11. cancelled

12. The voltage converter of Claim 6, wherein said first and second power supply circuits share a common voltage input and a common voltage output.

13. The voltage converter of Claim 6, wherein said detecting circuit includes a current sense amplifier coupled to a power input line for said first and second power supply circuits.